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# DOCTORAL PREPARATION PROGRAMS
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# A STUDY OF DOCTORAL PREPARATION AT THE UNIVERSITY OF TENNESSEE FOR COLLEGE STAFF MEMBERS

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Southern Regional Education Board

February 1959

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# CHAPTER I

## AN OVERVIEW OF THE STUDY

College and university staff members stand at the apex of the educational system. To their hands is entrusted the final step in the process of developing scholars and scientists and of preparing members of the professions, including teachers of children and younger adolescents. Thus, their responsibility for and influence on the total educational program is far greater than their proportion of all those employed in education. Perhaps this very fact partly accounts for the limited extent to which college staff members and their preparation have been subjected to systematic investigation. However, with the spotlight focused on higher education because of the needs of national security and the pressures of increasing demands for more and more highly trained and well-educated citizens, systematic study is essential to provide evidence on which wise decisions can be based.

This study makes no pretensions to more than a slight effort to provide information for those at the University of Tennessee who share in the preparation of prospective college staff members. If it should serve to encourage other and better studies at other graduate institutions, the effort expended on it would be well worthwhile.

The study was made possible through a fellowship grant from the Southern Regional Education Board. It is one of a series conducted under the auspices of an Advisory Committee composed of University of Tennessee administrators and staff members appointed by the President of the University. While the Advisory Committee gave general approval for undertaking the study, responsibility for this report and its interpretations, conclusions, and recommendations rests wholly upon the investigator. Further, it should be stressed that whatever use is made of the study is the prerogative of the Graduate School, the colleges, the academic departments, and the other regularly constituted agencies of the University.

### Nature of the Study

The purpose of this study was to examine through the eyes of its doctoral graduates the preparation offered at the University of Tennessee for college staff members. Background data were gathered concerning doctoral production and certain characteristics of those doctoral graduates who have become college staff members.

However, the study centered on the perceptions and reactions reported by those currently employed in higher education institutions who received doctorates at the University of Tennessee from December, 1948, to August, 1958. They were asked to discuss their own graduate preparation, problems and difficulties they had faced, and their suggestions for preparation of prospective college staff members.

## Procedures Used In The Study

The first task involved in developing the study was to determine what information would contribute to the purposes of the study. The study was concerned with how those doctoral graduates of the University of Tennessee now in college staff positions could best contribute to the improvement of graduate preparation for prospective college teachers. Therefore it was decided that their perceptions of their own preparation, their statements of the problems they confronted, and their suggestions of ingredients needed in a graduate program should constitute the core of information. Furthermore an instrument was sought which would allow flexibility in responses and give subjects the opportunity to present their ideas in some detail. The instrument finally evolved was the University of Tennessee Doctoral Graduate Questionnaire, a copy of which is included in the Appendix. It was developed by the investigator with the assistance of several members of the Advisory Committee and suggestions from members of the Southern Regional Education Board Research Division. Drafts were tried out with some advanced graduate students and a few graduates before the final form was adopted.

Names of all persons awarded doctorates at the University of Tennessee were secured from the Graduate Office. Determining which ones were employed by colleges and universities and securing their current addresses were accomplished by contacting each of the departments offering doctoral majors. Many of those departments keep card files or lists of their graduates and their addresses, and the others were able to provide such information through staff members. A card containing certain essential information about each graduate was prepared and utilized in sending questionnaires and checking their return.

Each current college staff member was sent a copy of the questionnaire accompanied by a letter from the Dean of the Graduate School briefly explaining the study and requesting the recipient's participation in it. A stamped, self-addressed return envelope was also included. After approximately two weeks, a follow-up postcard was sent to all those who had not returned the questionnaire. The total response was 88.2 per cent; for graduates of departments on the Knoxville campus it was 92.8 per cent. (Some clinical departments of the College of Medicine located at Memphis offer doctoral majors.)

Analysis of data for the first few items on the questionnaire was largely a matter of computation. However, analyzing the open-end questions required setting up broad categories of responses and determining those in which each statement belonged. It further involved summarizing and interpreting answers. If a statement of a respondent was felt to be especially pertinent or illustrative it was quoted verbatim. Names were not given, however, because some respondents obviously considered the questionnaire to be of a confidential nature.

## Major Findings

This section presents a summary of findings. More detailed analyses of the data are presented and discussed in succeeding chapters.

During the past ten years the University of Tennessee has produced 332 doctorates; 136, or 41.0 per cent of them are currently employed as staff members of colleges and universities. By departments the per cent so employed ranges from 100.0 in Botany to 0.0 in Metallurgy. The mean length of elapsed time between receipt of the bachelor's degree and receipt of the doctorate for departments having more than five doctoral graduates ranges from 16.0 years in Botany to 7.0 years in Bacteriology, Chemistry, and Psychology. There is a strong tendency toward a greater mean length of elapsed time in departments from which high percentages of doctoral graduates are employed in higher education than in those from which low percentages are so employed. The 125 graduates at the Knoxville campus who are working in colleges and universities are distributed among seventy-two institutions located in twenty-eight different states and Iraq. They received their undergraduate degrees from institutions in thirty different states and Iraq. Fifty-three completed undergraduate work in Tennessee institutions and forty-three are employed in Tennessee institutions. The high mobility of these people is indicated by the fact that only 29.6 per cent of them are employed in states in which they did their undergraduate work.

Although over half of these graduates received their final degree in the past five years, the questionnaire respondents indicated that they occupy positions ranging from academic dean to instructor; only about one-third hold academic ranks lower than that of associate professor.

Respondents reported by far the greatest amount of time, a mean per cent of 55.7, devoted to teaching. Administration and research respectively required 16.4 per cent and 14.3 per cent of the time of staff members. Counseling required only 6.0 per cent. There was great variation among the graduates of different departments with respect to mean per cent of time allocated to the several functions. Thirty-seven people reported having taught at least one course for which they did not have specific subject-matter preparation in the graduate school. Less than one-third of the graduates (primarily in the sciences and psychology) reported no full-time educational work experience prior to receiving the doctorate, while over half of them reported full-time employment in college work prior to receiving doctorate. In some departments the mean years of full-time educational work prior to receipt of the doctorate was more than ten years. All except twenty of the respondents were employed in some part-time educational work during their graduate program. Only two who are now employed in higher education received their degrees without having had some work experience in education. Of the twenty-five respondents who indicated they had not definitely planned when they were graduate students to enter college or university employment, fourteen had not had full-time teaching experience.

Graduates were asked to identify the most important contributions of their graduate program. Most frequently mentioned (eighty-one times) was some aspect of research. The second most frequently mentioned (sixty-seven times) area was subject matter or content. Association with staff was cited thirty-nine times; while direct references to teaching experience or training in teaching occurred only twenty-one times.

It was apparent in the analyses of the responses to the question regarding specific preparation for college staff work that the element found in the graduate program most frequently perceived as worthwhile was part-time teaching experience. Less often was reference made to supervision and assistance in the teaching experience. Considerable insight into the operation of an institution was gained by some students who had opportunities to associate in informal settings with members of the staff. Little direct formal consideration was given to institutional role and operation, roles and problems of staff members, curriculum problems of higher education, or effective teaching procedures.

A major problem perceived by college staff members who have taken doctorates at Tennessee is lack of time to do all the things they want to do or are expected to do. Problems cluster largely in two major categories: research and administration. About half of the problems reported in research related to lack of time, while most of those in administration stemmed from relationships of administrators and staff members. Although teaching required more time than any other function, fewer problems were reported in instruction than in research and administration. Relations with colleagues and with students occasioned some problems, as did the area of counseling. In the latter, the major difficulty resulted from insufficient time for adequate counseling.

A request for suggestions about the ingredients of a preparation program for prospective college staff members elicited many comments about the importance of teaching experience, of instruction in effective teaching and the problems of college teaching, and of information about institutional operation. The comments also frequently reiterated the importance of stress on research and subject matter as elements in the preparation of successful college staff members. Suggestions about the graduate program are treated in detail in Chapter V.

## Conclusions and Recommendations

If doctoral production at the University of Tennessee continues to increase at its rate of growth during the past ten years, approximately 440 doctorates will be produced in the next five years. Should this occur and should the percentage of doctorates entering college work continue to hold, approximately 175 of these people will find employment in colleges and universities. This will be a small contribution indeed to the estimated need for approximately thirty-five thousand college staff members in the South by 1966. On the basis of the findings in this study concerning doctoral production, it is recommended that the appropriate authorities at the University of Tennessee give consideration to the following questions:

1. What steps can be taken to augment doctoral production of prospective college staff members?
2. What factors account for the uneven productivity in approved doctoral programs?
3. How can the resources and facilities of the University be marshaled for the most economical and effective doctoral production?
4. What steps can be taken to reduce unduly prolonged periods of elapsed time for some people between the securing of a bachelor's degree and the acquiring of a doctorate?

The graduate program for prospective college staff members appears to have made outstanding contributions through its emphasis on research and subject matter. On the other hand part-time teaching is carried on by an overwhelming majority of doctoral students who later enter college and university work and is the most frequently cited item of specific preparation for college teaching. In the light of these findings and the problems reported and suggestions made by the subjects of this study, it would seem worthwhile for those having responsibilities for the programs of prospective college staff members to examine the following questions:

1. What can be done to make the part-time teaching experiences of graduate students (in such capacities as instructor and teaching assistant) more significant and effective elements in their preparation for college staff positions?
2. What implications do the problems and difficulties reported by the subjects of this study have for graduate programs of prospective college staff members?
3. How can the suggestions of former graduate students now employed in colleges be utilized by present and future students in developing the competencies needed for college teaching?

During the course of the present study, the need for additional information not included in its scope has become apparent. The increasing extent to which those with less than a doctor's degree are being utilized by higher education institutions, the large numbers of respondents in this study who had full-time college teaching positions prior to receipt of the doctorate, and the extent to which graduate students are employed as part-time teachers all suggest the need for a careful study of predoctoral training and its effectiveness in the preparation of college staff members. Increasing demands for college personnel and the relatively low percentage of doctoral graduates of the University of Tennessee who seek positions in colleges suggest the need for determining why this is true and whether it is desirable to examine the need of changing the present pattern of post-doctoral employment. The relationship between demand outside academic circles for people with doctorates and the elapsed time to the doctoral degree found in this study needs to be further tested and extended to a general investigation of the impact of "outside forces" on change within higher education institutions. The extent to which administrator-staff relationships appeared to present problems to the subjects of this study indicates a need for extensive study and experimentation in this whole area.

# CHAPTER II

# TENNESSEE'S DOCTORAL GRADUATES AND THEIR EMPLOYMENT IN HIGHER EDUCATION

This chapter deals with the doctoral graduates of the University of Tennessee from 1948 to 1958 and some characteristics of those who are employed in colleges and universities. The focus of attention is on certain factors felt to be closely related to their graduate work.

## Doctoral Production at the University of Tennessee

Twenty-three departmental doctoral programs have been authorized at the University of Tennessee, including five Doctor of Philosophy programs in clinical departments of the college of Medicine. The Doctor of Philosophy degree is awarded in all except three departments; in the education departments the degree is Doctor of Education.

During the past ten years these programs have produced a total of 332 doctorates. Table 1 shows that the total production almost doubled during the final five years of that period. Of the 332, only twenty-three were women. In some departments production remained constant while in others it increased tremendously. Such variations should not be unexpected for an institution in which doctorates conferred were almost a rarity prior to World War II. The largest number of doctorates came from the sciences and education, while few such degrees were conferred in the humanities and social sciences, except for psychology.

The data in Table I raise certain questions for consideration:

1. Can the resources and facilities of the University for doctoral study be utilized better by concentrating on the development of a few programs or by securing adequate resources in other areas for a wider range of programs?

2. What factors account for the uneven productivity in approved programs?

## TABLE 1

## UNIVERSITY OF TENNESSEE

## NUMBER OF DOCTORAL GRADUATES BY DEPARTMENTS 1948-1958

| Department | No. from Dec. 1948 thru Aug. 1953 | No. from Dec. 1953 to date | Total | No. of Women |
|---|---|---|---|---|
| Bacteriology | 4 | 8 | 12 | 0 |
| Botany | 0 | 8 | 8 | 3 |
| Chemistry | 34 | 33 | 67 | 2 |
| Chemical Engineering | 4 | 8 | 12 | 0 |
| Curriculum & Instruction | 7 | 13 | 20 | 3 |
| Educational Administration and Supervision | 7 | 48 | 55 | 2 |
| English | 6 | 7 | 13 | 5 |
| Geography | 0 | 2 | 2 | 0 |
| Geology | 0 | 0 | 0 | 0 |
| History | 0 | 0 | 0 | 0 |
| Home Economics Education | 0 | 0 | 0 | 0 |
| Mathematics | 6 | 6 | 12 | 1 |
| Metallurgy | 0 | 4 | 4 | 0 |
| Physics | 12 | 20 | 32 | 0 |
| Political Science | 0 | 1 | 1 | 0 |
| Psychology | 22 | 28 | 50 | 2 |
| Zoology and Entomology | 6 | 8 | 14 | 0 |
| Medical College Ph.D. | 4 | 26 | 30 | 5 |
| TOTAL | 112 | 220 | 332 | 23 |

## Doctoral Graduates Employed In Higher Education

Although traditionally it has been assumed that the doctorate was for those who were going into college work, only 136, or two-fifths, of all the Tennessee graduates of the past ten years have done so. (See Table 2.) Because of competition from industry, government, and private practice the proportion is even much smaller in the physical sciences, engineering, and psychology. A very high percentage of the graduates in English, Botany, Curriculum and Instruction, and Mathematics has entered college teaching. Educational Administration and Supervision has supplied the largest number of college staff personnel, but many of them are in full-time administrative positions. Of the twenty-three women graduates, fourteen went into higher education.

While no generally comparable figures are available, Florida State University reported 57.5 percent of its doctoral graduates of the period 1952-1957 were employed by higher education institutions.[1] The per cent of Tennessee graduates going into college staff positions is generally similar to that reported by the National Education Association for 5,307 doctor's degree graduates of 1955 and 1956 who entered new occupations.[2] That report showed that of the doctoral graduates from 117 institutions 67.9 per cent in biological sciences, 90.4 per cent in education, 92.4 per cent in English, 27.4 per cent in engineering, 67.5 per cent in mathematics, 25.7 per cent in chemistry, 40.6 per cent in physics, and 38.6 per cent in psychology went into educational service. It should be pointed out that these data are not quite comparable to those in Table 2, since the N.E.A. report covers only those graduates entering new occupations and since "educational service" includes other phases of education in addition to colleges and universities.

There is an estimated need of between 35,000 and 50,000 teachers for colleges and universities in the South by 1966.[3] Assuming that a doctoral degree is requisite to full preparation for such teaching, the demands on graduate programs such as

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[1] Office of Educational Research and Service, Florida State University, A Study of Florida State University Doctoral Graduates, August, 1957 (Mimeographed), p. 19.

[2] N.E.A. Research Division, "Teacher Supply and Demand in Colleges and Universities"(Washington: National Education Association, 1957), p. 31.

[3] Project General Outline, "University of Kentucky - SREB Project, Preparation for College Teaching" (Mimeographed), 1959.

## TABLE 2

## NUMBER AND PER CENT OF UNIVERSITY OF TENNESSEE DOCTORAL GRADUATES FROM DECEMBER, 1948, THROUGH AUGUST, 1958, NOW IN STAFF POSITIONS IN HIGHER EDUCATION

| Department | Number | Per Cent |
|---|---|---|
| Bacteriology | 7 | 58.3 |
| Botany | 8 | 100.0 |
| Chemistry | 7 | 10.4 |
| Chemical Engineering | 3 | 25.0 |
| Curriculum and Instruction | 16 | 80.0 |
| Educational Administration and Supervision | 33 | 60.0 |
| English | 12 | 92.3 |
| Geography | 2 | 100.0 |
| Metallurgy | 0 out of 4 | 0.0 |
| Mathematics | 9 | 75.0 |
| Physics | 6 | 18.8 |
| Political Science | 1 | 100.0 |
| Psychology | 14 | 28.0 |
| Zoology and Entomology | 7 | 50.0 |
| Medical College Ph.D.'s | 11 | 36.7 |
| TOTAL | 136 | 41.0 |

that at the University of Tennessee will be increasingly great. Three-fourths of the Tennessee graduates now in college positions have gone into the area served by the Southern Regional Education Board. (See Table 4.)

Obviously, a major question raised by this study is: How can the University of Tennessee increase the number of doctorates preparing for college teaching, especially in those fields in which the need is greatest? Alternatives include increasing the total number of doctorates, increasing the percentage entering college teaching from certain fields, and shortening the time required for full preparation for college teaching.

## Elapsed Time from Bachelor's Degree to Doctorate

Considerable interest has been generated in recent months in examining the time required to acquire a doctoral degree. Frequently many years elapse between the time a person receives his bachelor's degree and the doctorate. How long is this time generally? What is an appropriate length of time? What factors in the personal or financial status of the individual affect the length of time involved? What factors in the graduate program affect the length of time involved? All these are significant questions at a time when the need for college teachers, especially fully trained ones, is serious.

At the present time at least two major studies are underway which should throw some light on the problem of elapsed time between college graduation and a doctoral degree. One is being conducted by the Research Staff of the Southern Regional Education Board. It deals with doctorates awarded in all fields in the Southern Region. Another is being conducted for the field of education by the American Association of Colleges of Teacher Education.

At the University of Tennessee there is wide variation from department to department in the average length of time elapsing between a bachelor's degree and a doctorate. As Table 3 shows, the averages run from 4.8 years in Metallurgy to 21.0 years in Geography. Since these departments have few graduates, perhaps a better variation in the averages would be represented by the 7.0 years in Chemistry and 16.0 years in Botany. The range for individuals within departments is usually even greater than the range in averages.

If a doctor's degree represents full preparation for a career, it would hardly seem defensible, from the standpoint of productivity and economy, for a period in excess of six years to

## TABLE 3

## NUMBER OF YEARS FROM RECEIPT OF BACHELOR'S DEGREE TO RECEIPT OF DOCTORAL DEGREE FOR DOCTORAL GRADUATES OF THE UNIVERSITY OF TENNESSEE, 1948-1958, BY DEPARTMENTS

| Department | Range | Number of Years<br>Median | Mean | |
|---|---|---|---|---|
| Bacteriology | 3-11 | 7.0 | 7.0 | |
| Botany | 6-27 | 17.0 | 16.0 | |
| Chemistry | 3-17 | 6.0 | 7.0 | |
| Chem. Engineering | 3-14 | 7.0 | 7.9 | |
| Curriculum & Inst. | 5-22 | 15.0 | 13.5 | |
| Ed. Adm. & Supv. | 4-29 | 14.0 | 14.9 | |
| English | 4-25 | 12.0 | 13.6 | |
| Geography | 18-24 | 21.0 | 21.0 | |
| Metallurgy | 3-6 | 5.0 | 4.8 | |
| Mathematics | 5-23 | 7.5 | 10.5 | |
| Physics | 4-32 | 10.0 | 10.5 | |
| Political Science | 8 | 8 | 8 | (one only) |
| Psychology | 2-20 | 5.0 | 7.0 | |
| Zoology & Entomology | 5-10 | 7.0 | 7.1 | |

elapse between a bachelor's degree and the attainment of the doctorate. It is even doubtful whether that maximum time for experience and maturation could be justified in many fields. Yet, for those receiving the doctorate at Tennessee, the mean elapsed time in most fields is greater than six years.

Preliminary reports in the study being conducted by the Southern Regional Education Board indicate that Doctoral graduates (from 1950 to 1956) of Southern institutions included in the data have the following mean time lapse: Mathematics, 10.1 years; Physics and Astronomy, 8.1 years; Chemistry, 7.1 years; Botany 8.7 years; Zoology, 8.9 years; Psychology, 7.8 years; Education, 15.2 years; English, 13.0 years.[4] While these figures do not cover the same period of time included in the present study, the data are roughly comparable.

A rank order coefficient of correlation was computed for departments between mean elapsed time from the bachelor's degree to the doctorate (Table 3) and the per cent of graduates in college staff positions (Table 2). The correlation between these two factors was found to be .84, significant at the .01 level of confidence. This finding would tend to support the hypothesis that the demand for doctoral graduates outside the "academic marketplace" reduces the time span involved in acquiring the doctorate. It may also suggest that the marketability of the academic product to the society at large has some effect on the academic world itself.

## Distribution of Graduates

The doctoral graduates of the University of Tennessee (Knoxville campus) covered in this study who are now employed in higher education are distributed among seventy-two different institutions. Fifteen of them are employed by the University of Tennessee itself. East Tennessee State College, with six, and the University of Georgia, with five, rank second and third respectively, as employers. Memphis State University and Tennessee Polytechnic Institute employ four each. Institutions having three each are: Middle Tennessee State College, University of West Virginia, Georgia Institute of Technology, University of Mississippi, Louisiana State University, and Florida State University. Table 14 in the Appendix gives a full list of institutions in which these graduates are employed.

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[4] Figures taken from tables furnished by Research Division, Southern Regional Education Board.

Table 4 shows the geographic distribution of the doctoral graduates engaged in higher education. They are serving in twenty-eight different states and Iraq. Forty-three of them are located in Tennessee, while the next largest numbers are found in the neighboring states of North Carolina (ten) and Georgia (nine).

A comparison of origins of the subjects by institutions in which they received undergraduate degrees shows Tennessee again far ahead with fifty-three. Next however, are New York (six), North Carolina (six), and Indiana (five). Tennessee netted ten fewer of the graduates than it provided. States having membership in the Southern Regional Education Board netted eight persons in the doctoral process, since ninety-four are now employed in the Region while eighty-six received undergraduate degrees in the Region.

The history of these "academic men" provides an interesting commentary on the relation of higher education to population mobility; only thirty-seven, or 29.6 per cent are now employed in the same state in which they completed their undergraduate work.

## Data from The Questionnaires

Up to this point the data discussed in this chapter have come from sources other than the questionnaire returns. The remainder of this chapter and the succeeding chapters will deal with data taken from the questionnaires.

It should be pointed out that these data come only from graduates who are in college staff positions, and that they are compiled on the basis of department of major in the doctoral program rather than for the department or division in which the respondents currently are employed. While data for departments with fewer than five respondents are included in the tables, they are not usually discussed in the body of the study.

The return of the questionnaires, with the exception of those from the Medical College Ph.D's, was good. The total response was 88.2 per cent. The responses of the Medical doctorates who did reply were too incomplete to justify their inclusion in the study. Two of the four responded to items on page one of the questionnaire, detached pages two and three, and attached lists of their publications. The bibliographies of both respondents were quite lengthy.

Of 125 doctoral graduates of departments located on the Knoxville campus, 116 or 92.8 per cent responded to the questionnaire. Table 13 in the Appendix shows the per cent of returns by departments.

## TABLE 4

## STATE DISTRIBUTION OF COLLEGE STAFF PERSONNEL WHO ARE DOCTORAL GRADUATES OF UNIVERSITY OF TENNESSEE BY INSTITUTION IN WHICH THEY RECEIVED UNDERGRADUATE DEGREE AND INSTITUTION IN WHICH LOCATED AT PRESENT

| State | From | To | State | From | To |
|---|---|---|---|---|---|
| *Tennessee | 53 | 43 | New Hampshire | 2 | 0 |
| New York | 6 | 4 | Rhode Island | 2 | 0 |
| *North Carolina | 6 | 10 | Arizona | 1 | 0 |
| Indiana | 5 | 4 | California | 1 | 3 |
| *Georgia | 4 | 9 | Colorado | 1 | 0 |
| Michigan | 4 | 4 | *Florida | 1 | 4 |
| Missouri | 4 | 1 | *Kentucky | 1 | 1 |
| *South Carolina | 4 | 4 | Maine | 1 | 0 |
| *Louisiana | 3 | 5 | *Oklahoma | 1 | 1 |
| Massachusetts | 3 | 2 | *Texas | 1 | 1 |
| Ohio | 3 | 4 | Washington | 1 | 0 |
| *Virginia | 3 | 3 | Iraq | 1 | 1 |
| *West Virginia | 3 | 4 | Connecticut | 0 | 1 |
| *Alabama | 2 | 1 | Kansas | 0 | 2 |
| *Arkansas | 2 | 1 | *Maryland | 0 | 2 |
| Illinois | 2 | 1 | New Jersey | 0 | 1 |
| *Mississippi | 2 | 5 | Pennsylvania | 0 | 2 |
| Nebraska | 2 | 0 | Wisconsin | 0 | 1 |
|  |  |  |  | 125 | 125 |

* States belonging to the Southern Regional Education Board.

## Ranks and Positions Held

Ranks attained by the questionnaire respondents were: professor, fifteen; associate professor, thirty-two; assistant professor, thirty-seven; instructor, six. In addition, represented among the respondents were: academic dean, four; student personnel officer, four; department head, nine; registrar, two; assistant dean, two; evening school director, two; other directors, research associates, and miscellaneous, twelve. The record of achievement appears to be quite good, since about two-thirds of the subjects received doctorates within the last five years. Perhaps one reason for the relatively high position ratings is that over half of these graduates had college teaching experience prior to receiving their doctorates. No striking departmental differences in position attained appears among the graduates, except that, as could be expected, a large proportion of Educational Administration and Supervision graduates are in administrative positions. A department by department analysis of rank and position is presented in Table 15 in the Appendix.

## Allocation of Staff Time

College staff members were asked to indicate the per cent of work load generally allocated to different functions such as teaching, research, and administration. Because the interpretation of what is meant by "teaching" and other functions was left to the respondents, the data from different individuals may not be entirely comparable. However, the data indicate that the definitions used by different respondents were similar.

The mean time spent in "teaching" is generally considerably higher than in any other function, although there is great variation in the mean amount of time so spent by graduates of the various departments. The comparative emphasis on research in some fields within higher education institutions is reflected by the fact that more than one-fifth of all staff time reported falls into that category except in English, Education, Mathematics, and Botany.

It seems noteworthy that the per cent of time reported spent in counseling and advising students does not exceed one-tenth of total time for any departments, and for some fields it approaches zero. When the main business of higher education is with students,

## TABLE 5

## MEAN PER CENT OF STAFF TIME ALLOCATED TO VARIOUS FUNCTIONS

| | | Mean Per Cent of Time Devoted To | | | | | |
|---|---|---|---|---|---|---|---|
| Department | Number of Respondents | Teaching | Research | Administration | Counseling | Field Services | Other |
| Bacteriology | 6 | 39.0 | 43.6 | 7.1 | 1.6 | | 8.7 |
| Botany | 8 | 62.5 | 17.4 | 7.3 | 4.0 | 3.2 | 5.6 |
| Chemistry | 7 | 64.3 | 27.8 | 1.4 | 6.5 | | |
| Chem. Eng. | 2 | 55.0 | 5.0 | 35.0 | 5.0 | | |
| C. & I. | 15 | 58.0 | 4.5 | 15.4 | 10.4 | 6.7 | 5.0 |
| E. A. & S. | 30 | 40.8 | 3.6 | 37.8 | 9.1 | 7.0 | 1.7 |
| English | 11 | 83.2 | 2.4 | 8.6 | 5.8 | | |
| Geography | 2 | 72.5 | 5.0 | 7.5 | 5.0 | 10.0 | |
| Mathematics | 8 | 78.6 | 17.1 | 0.7 | 3.6 | | |
| Physics | 6 | 68.3 | 19.2 | 1.7 | 2.5 | | 8.3 |
| Political Sci. | 1 | | 100.0 | | | | |
| Psychology | 14 | 41.9 | 27.9 | 9.9 | 2.6 | 1.7 | 16.0 |
| Zoology | 5 | 47.0 | 35.0 | 16.0 | 2.0 | ___ | ___ |
| AGGREGATE MEAN | | 55.7 | 14.3 | 16.4 | 6.0 | 3.3 | 4.3 |

it is striking that so little time should be allocated for their counseling and advisement. Possibly the development of professional counselors helps to account for the small per cent of time devoted to this job by academic staff. One scientist complains:

> "The counseling of prospective science majors is done by administrators who are not interested in science; students are advised to major in a less difficult field."

Field services performed by the questionnaire respondents required a negligible amount of the total time they have at their disposal. Various other functions were generally minor, although diagnostic and clinical work required some of the time of psychologists.

### Relationship of Teaching Assignment to Major Field

In an effort to ascertain the extent to which subject content preparation was related to present staff assignments two analyses were run. The first one compared the name of the department in which employed to that of doctoral major. All the majors in Mathematics, English, and Physics are teaching in departments having the same names as the departments in which they received their degrees. None of those in Botany or Zoology are. However, this fact stems primarily from the differences in the ways in which biological science departments are organized rather than from the straying of botanists and zoologists from their chosen fields. Seventeen respondents were affiliated with departments which the investigator could not classify "the same as or almost equivalent to" the major doctoral department. Five of those were from Curriculum and Instruction, five from Educational Administration, three from Botany, two from Psychology, and one each from Chemistry and Zoology. Again, however, when a psychologist is teaching human relations in industry in a Department of Industrial and Personnel Management it would be somewhat presumptuous to say that he is out of his field. In addition, some of the respondents indicated they had strong minor or collateral areas in fields other than their major. For example, one man teaching biology makes this comment about his preparation:

> "I was a graduate student in botany, but took additional courses in Zoology and bacteriology, and each has its contribution to one who works in a small college and may find it necessary to teach any course in the curriculum."

The second analysis deals with those teaching courses for which they had no specific preparation in their graduate work.

## TABLE 6

## NUMBERS OF QUESTIONNAIRE RESPONDENTS TEACHING COURSES FOR WHICH THEY HAD NO SPECIFIC SUBJECT MATTER PREPARATION

| Department | Total Respondents | Number Teaching Course Without Specific Preparation |
|---|---|---|
| Bacteriology | 6 | 0 |
| Botany | 8 | 4 |
| Chemistry | 7 | 1 |
| Chemical Eng. | 2 | 1 |
| C. & I. | 15 | 4 |
| E. A. & S. | 30 | 8 |
| English | 11 | 5 |
| Geography | 2 | 1 |
| Mathematics | 8 | 3 |
| Physics | 6 | 2 |
| Political Science | 1 | 0 |
| Psychology | 14 | 6 |
| Zoology | 5 | 2 |
| TOTAL | 115 | 37 |

Thirty-seven respondents reported teaching such courses. Table 6 presents a departmental breakdown of information on this point.

Although these figures may raise the question of adequacy of subject matter preparation, three points should be remembered. Several respondents mentioned that although no specific graduate work covered certain courses they were now teaching they considered the undergraduate preparation adequate and implied that additional graduate work for teaching a particular course would be needlessly repetitious. The second point is that some of the courses offered by the respondents deal with new information which may not have been known even as recently as when they were in graduate school. Examples are radiological safety and heterogeneous reactor design. The third point is that so rich and diversified is present knowledge that one could spend a lifetime studying in almost any field without exhausting its content.

## Educational Work Experience of the Respondents

Data related to the whole problem of work experience and preparation for college teaching were gathered directly through three items on the questionnaire. They dealt with full-time educational work experience prior to receipt of the doctorate, total number of years as full-time college staff member, and employment in teaching during graduate work. Other items bear indirectly on the question. The need for internship or experience as a graduate student would seem to be related to prior teaching experience and its applicability to effective preparation.

Table 7 shows that almost three-fourths of the respondents had had full-time work experience in education prior to receiving their doctorates and over half of them had had such experience in college. On this item there were extreme differences among departments, for instance, in Bacteriology, Chemistry, Physics, and Psychology the proportion who had had full-time educational work experience prior to graduation was low.

An overwhelming number of the respondents was employed in some type of educational work experience (either as instructors, graduate assistants, or teaching assistants) during their graduate work. Only two, one in Psychology and one in Botany, reported no educational work experience, either full time or part time, prior to receipt of the doctorate.

If one assumes that experience is useful in preparing to become a full-time college staff member, it would seem particularly important for those departments in which some of the graduates enter college employment without having had prior teaching experience

## TABLE 7

## EDUCATIONAL WORK EXPERIENCE OF QUESTIONNAIRE RESPONDENTS PRIOR TO RECEIVING DOCTORATE

| | Full-time Experience | | | | | Part-time In Graduate Program | |
|---|---|---|---|---|---|---|---|
| Department | Yes | No | College | Secondary | Elementary | Yes | No |
| Bacteriology | 1 | 5 | 1 | 0 | 0 | 6 | 0 |
| Botany | 7 | 1 | 7 | 5 | 3 | 6 | 2 |
| Chemistry | 1 | 6 | 1 | 1 | 0 | 7 | 0 |
| Chem. Eng. | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| C. & I. | 15 | 0 | 11 | 12 | 6 | 12 | 3 |
| E. A. & S. | 31 | 0 | 17 | 21 | 14 | 17 | 14 |
| English | 9 | 2 | 7 | 7 | 3 | 11 | 0 |
| Geography | 2 | 0 | 2 | 1 | 0 | 2 | 0 |
| Mathematics | 7 | 1 | 7 | 3 | 0 | 8 | 0 |
| Physics | 1 | 5 | 1 | 0 | 0 | 6 | 0 |
| Pol. Sci. | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| Psychology | 6 | 8 | 5 | 1 | 1 | 13 | 1 |
| Zoology | 3 | 2 | 2 | 1 | 0 | 5 | 0 |
| TOTAL | 84 | 32 | 62 | 52 | 28 | 96 | 20 |

to provide it during the graduate program. In general they have done so.

On the other side of the picture, some people would hold that prolonged experience prior to full preparation is an uneconomical utilization of manpower. Table 8 shows that in some departments, the mean length of educational work experience prior to receipt of the doctorate for graduates who are now in higher education exceeds ten years. Because of the great demand for fully qualified college teachers, encouragement for earlier entry into advanced graduate work might be considered important in some fields.

Table 8 also shows the mean years, including the present one, of service as full-time college staff members. When these figures are compared with position and rank data in Table 15 in the Appendix, the progress of these graduates in their careers seems to be satisfactory.

The questionnaire sought to determine whether current higher education staff members intended when they were doctoral students to enter college work. Only ten stated that they planned to enter other work and only fifteen were uncertain what work they would enter. Of those not definitely planning to enter higher education, fourteen had had no prior full-time teaching experience. In other words about half of those without experience did not plan to go into college work, while only about one-eighth of those who had had teaching experience did not plan to do so. Since this study is primarily concerned with those now in college teaching, it did not attempt to determine how many doctoral graduates who had planned to enter college positions are now in other work. However, during interviews with some department heads in which the investigator was attempting to determine the present employment of graduates, several were mentioned who had been in college teaching but had been lured into more lucrative positons. The college of Engineering employed two of its own doctorates who later went into industry at approximately twice their university salaries. According to the interviewees, there were no other reasons for the change. One graduate in school administration returned his questionnaire with an accompanying letter saying he was moving from a college to a position with the United States Office of Education.

## TABLE 8

## MEAN YEARS QUESTIONNAIRE RESPONDENTS WERE EMPLOYED IN FULL-TIME EDUCATIONAL WORK PRIOR TO RECEIPT OF DOCTORATE AND TOTAL MEAN LENGTH OF SERVICE (INCLUDING PRESENT YEAR) AS FULL TIME COLLEGE STAFF MEMBER

| Department | Number of Respondents | Mean Years Full-time Educational Service Before Doctorate | Total Mean Years As College Staff Member |
|---|---|---|---|
| Bacteriology | 6 | 0.2 | 2.2 |
| Botany | 8 | 10.7 | 11.5 |
| Chemistry | 7 | 0.9 | 5.3 |
| Chemical Eng. | 2 | 0.0 | 4.5 |
| C. & I. | 15 | 10.1 | 8.6 |
| E. A. & S. | 31 | 10.7 | 7.7 |
| English | 11 | 7.5 | 7.4 |
| Geography | 2 | 15.5 | 17.0 |
| Mathematics | 8 | 3.8 | 7.4 |
| Physics | 6 | 1.0 | 5.2 |
| Political Sci. | 1 | 4 (one only) | 5 |
| Psychology | 14 | 1.5 | 5.7 |
| Zoology | 5 | 1.5 | 4.2 |

# CHAPTER III

## PREPARATION IN THE GRADUATE PROGRAM FOR COLLEGE STAFF MEMBERS

What are the most important contributions to prospective college staff members of the graduate program at the University of Tennessee? What specific preparation for college staff work does the University provide? This chapter attempts to summarize the answers 116 doctoral graduates gave to these questions. Tabulations were made by categories of the most significant aspects of the graduate program cited by the respondents to an open-end question which asked for the three most important things they got from their graduate work. When one statement was relevant to more than one category, it was counted in both. Table 9 provides a numerical summary by categories. Responses to the question regarding specific preparation for college staff work are summarized in a discussion for each department in which there were five or more questionnaire returns. It should be emphasized that these summaries represent the perceptions as reported by the graduates of the things which to them constituted preparation and may not reflect accurately what the departments consider to be their "program" of preparation. Perhaps it would be valuable for departments to prepare statements of their activities designed to prepare college teachers. The examination by the departments of such statements in relation to the data found in this chapter might be of considerable value.

### Major Contributions of the Graduate Program

The major contributions of the graduate program for those who are currently engaged in higher education seem to lie clearly and unmistakably in two areas: research and content. Responses falling into these two categories numbered eighty-one and sixty-seven respectively; the frequency with which statements fell into any other area was much less than for either of these.

Statements about research revealed many different ways in which the graduate program contributed to the research function. Often reported were the values of the research experience and the techniques of research which were learned. Some staff members stated that the stimulus to do research and association with professional researchers were significant. In this connection, a few scientists mentioned the opportunity to work with full-time research specialists at Oak Ridge. Several people commented on their ability to conduct independent research as a result of their graduate training.

## TABLE 9

## FREQUENCY OF MENTION OF AREAS IN WHICH GRADUATE PROGRAM MADE MOST IMPORTANT CONTRIBUTIONS TO CURRENT COLLEGE STAFF MEMBERS

| Department | Number of Respondents | Research | Subject Matter | Critical Thinking | Teaching | Association with staff |
|---|---|---|---|---|---|---|
| Bacteriology | 6 | 2 | 2 | 1 | 1 | 0 |
| Botany | 8 | 6 | 7 | 1 | 4 | 3 |
| Chemistry | 7 | 6 | 6 | 2 | 1 | 2 |
| Chem. Eng. | 2 | 1 | 2 | 2 | 1 | 0 |
| C. & I. | 15 | 8 | 6 | 0 | 3 | 5 |
| E. A. & S. | 31 | 14 | 9 | 5 | 3 | 16 |
| English | 11 | 6 | 10 | 1 | 3 | 3 |
| Geography | 2 | 2 | 1 | 0 | 0 | 0 |
| Mathematics | 8 | 4 | 4 | 0 | 0 | 2 |
| Physics | 6 | 7 | 5 | 0 | 1 | 1 |
| Political Sci. | 1 | 1 | 0 | 0 | 0 | 1 |
| Psychology | 14 | 17 | 10 | 3 | 3 | 4 |
| Zoology | 5 | 7 | 5 | 0 | 1 | 2 |
| TOTAL | 116 | 81 | 67 | 15 | 21 | 39 |

The number of people who cited increased grasp of subject matter as a significant aspect of their programs would seem to indicate that here is another area of considerable strength in graduate work at the University of Tennessee. The tenor of most of the statements concerning subject matter shows it often to be advanced material related to a specialty within a field. However, a few people pointed to breadth of content and its value. For example, a psychologist said:

> An important element in my graduate education was contact with all faculty members in the department leading to some appreciation of the entire vista of the discipline rather than to constrictive specialization.

Because the extent to which critical thinking is a concomitant of research and knowledge is disputed, where critical thinking, critical evaluation and other similar items were reported, they were classified separately and tabulated under the heading "Critical Thinking." The development of critical and independent thinking is often offered as a major objective of graduate work. The total number of responses falling into this category was fifteen.

Direct references to some aspect of teaching were tabulated together. These included such things as experience as teaching assistant or instructor, acquaintance with problems involved in teaching, increased competence in presentation of data, and knowledge of better methods. The infrequency with which some direct aspect of teaching was mentioned as an important part of graduate work indicates that many of the questionnaire respondents do not perceive their most significant experiences as falling into this category. There is no intent here to discount research and subject matter as ingredients in the preparation of college teachers; in fact, they would appear to be predominant elements in this preparation for the graduate student at Tennessee.

Intimate association of the graduate student with outstanding scholars and teachers is sometimes sloganized by graduate schools. Of course, both the eminence of the scholar or teacher and the closeness of association are involved. In the category "Association with Staff" were compiled items about encouragement and stimulation from staff, inspiration received from working closely with staff, and the importance of an informal and cooperative atmosphere created by the staff. Thirty-nine people reported such things as being significant to them in their graduate education. On the other hand, only twelve respondents mentioned association with other students as important. Apparently there was either little such contact or else it was not considered to be a most important educational experience. That the former may be the prevalent reason is suggested by this comment:

> Encouragement should be given to association among graduate students in different fields. Planned graduate housing might be a step in the right direction.

Association of graduate students from different fields might possibly pave the way for better understanding of colleagues and of other fields for the graduate who becomes a college staff member.

Many statements fell into miscellaneous categories. Although the development of a logical, consistent, and defensible philosophy of education was mentioned sixteen times, such statements were peculiar to those in the two education fields, Administration and Supervision and Curriculum and Instruction. Five people, each from a different field, pointed to the attainment of the degree as a most important thing they got from their graduate education, while four others listed salary increases or promotions which they felt were direct results of the degree. Various kinds of field work under competent supervision were cited by five as was the development of ability to work better with other people. The following items appeared only once or twice: importance of the foreign language for reading in my field; greater competence in guidance and counseling; improved ability to communicate in writing or orally; a clearer understanding of the origin and nature of social values; development of a broader concept of higher education and its role in a democratic society; learning to take responsibility for my own development; greater understanding of myself; and understanding of the administration of a program of higher education.

In conclusion, it seems worthy of pointing out that implications for improvement in the preparation of college staff members to be derived from this section may lie as much in the absence of items or infrequency with which they appear as in those things which often appear.

## Specific Preparation for Work as a College Staff Member

This section attempts to summarize briefly the elements of preparation perceived by the questionnaire respondents. Summaries are presented by departments in which there were as many as five questionnaire returns.

### Bacteriology

Seminar programs and informal discussions with staff members along with experience as teaching assistants and laboratory assistants seem to be prevalent means of preparation in this department. Formal course work is also looked upon as specific preparation. Advisers sometimes discuss aspects of an academic career with the students. An unusual opportunity afforded one graduate is cited:

> In addition to the valuable experience gained by teaching and assisting in laboratories, I gained from being custodian of the stock room and from ordering and cataloguing supplies an insight into administrative problems which many graduate students do not get.

## Botany

Teaching and planning for classes and laboratory work as assistants and instructors give experience in utilizing teaching techniques and practices. Formal course work is considered preparation for college teaching, while the taking of courses in related biological sciences and the observation of experienced college teachers in the general botany courses are noted as especially worthwhile. One person cited the familiarity with organizational and administrative problems gained through assignment on departmental committees. One graduate observed:

> I took no courses in "education" or "how-to-teach" courses. This type, to me, is almost a waste of time. The subject matter courses are invaluable.

A description of what seemed to one graduate to be a particularly valuable seminar experience follows:

> The problems of college teachers were discussed in seminars in the Department of Botany and at times conjointly with the Department of Zoology. One seminar was on "Biological Supplies." We received a list of the firms where supplies could be purchased; we learned about the quality of supplies from different firms. We were also told how to make some of our own equipment; we were shown reference books which described methods and materials for the teaching of biology.

Some provision is made in this field for graduate students to attend scientific meetings.

## Chemistry

The preparation and presentation of technical papers and reports as well as the preparation of laboratory reports and progress reports seem to be major activities in Chemistry which help people prepare for college teaching. Other things include observation of teaching methods of professors, the research experience, and work as teaching assistant. The normal graduate curriculum also functions as preparation.

## Curriculum and Instruction

Several specific courses which students in Curriculum and Instruction elect are regarded as having a bearing on their preparation for college staff positions. Among these are courses in the historical development and current problems of higher education, philosophy of education, personnel management and problems, and courses in curriculum planning and development. Field experiences of various kinds are frequently cited by graduates of this department. They include participation in public school evaluations and surveys, opportunities to visit student teaching centers and other college campuses for conferences with administrators and professors, observation and participation along with the regular staff in curriculum workshop and in-service programs of public school systems, and observation in high schools.

In this department, as in others, experience as a teaching assistant actually handling courses or working with a regular staff member in a course is available. A three-quarter seminar, required of all doctoral students in education, is a focal point for the discussion of problems and issues of higher education as well as for the presentation of research outlines by doctoral students, some of which deal with phases of college work, particularly of teacher education. An example of such research is quoted:

> The dissertation which I did for the doctorate had to do with certain aspects of teacher preparation programs in the seven state-supported colleges and universities. I think this research project gave me considerable background on teacher education programs in the state of Tennessee. It also pointed out some major problems in the broad area of teacher education.

Graduates also state that some courses are so organized as to afford considerable opportunity for graduate students to assist in their planning. Specific reference is made by one respondent to training in counseling.

## Educational Administration and Supervision

The pattern of preparation reported by graduates of this department is somewhat similar to that in Curriculum and Instruction.

Specific courses considered of value were in higher education, interpersonal relations, philosophy and theory of education, personnel problems, counseling and guidance, statistics, psychology, and public finance. Several graduates expressed a feeling of the value of courses they had taken in colleges other than education, particularly in Liberal Arts and Business Administration. Those who were in administrative positions cited various courses in the departmental major as being of particular value. Opportunities afforded through the doctoral seminar to present research problems to both staff and other students seemed important. Participating in research projects carried on by the department and assisting masters' students with thesis problems also seemed to be worthwhile experiences. Again, some of the research studies undertaken by the graduates dealt directly with phases of college administration or instruction, and the visitation of other college campuses in connection with the thesis provided opportunities for broad observation of the work of higher education as did participation in conferences with staff members from other colleges and universities. Field services such as workshops, surveys, and conferences of administrators were also cited as important.

Informal weekly seminars at lunch and other informal sessions enabled students to become closely acquainted with the staff and other graduate students who had been college teachers. Guidance given by advisers and doctoral committee members both in formal committee meetings and individually were listed as ways of becoming acquainted with problems involved in college teaching. One student summarizes these aspects this way:

> Perhaps a most significant part of my program came from my interaction with other graduate students and staff members in both formal and informal relationships. The relationships which I was helped to establish there provided me with (as I perceived it) the freedom to think and learn.

### English

Several graduates of English write with enthusiasm about the helpful direction and supervision they received as teaching assistants. The teaching experience involved opportunity for learning and practicing good teaching procedures and participation in staff meetings where problems of teaching, grading, and administration were discussed. The careful planning for the freshman composition courses found at Tennessee is mentioned. Such planning includes provisions for the instructor to hold individual conferences with freshman students to help them with errors they make. For English graduates, most important after the teaching experience is the content of course work. One graduate says:

> Every course I took at UT aids me in carrying out my work as a college staff member. The "skills" I employ on the periphery--in counseling, relationships with colleagues and administrators, etc.,--are by-products of a good education and cannot, I believe, be taught directly.

The importance of association with professors and of research is emphasized by another:

> Several visits to the homes of some of the professors helped to put me in touch with the academic life as seen among college teachers. My correspondence with eminent scholars and with great libraries while writing my dissertation, as well as my trips to some of the fine libraries elsewhere, stimulated my interest in the academic life.

## Mathematics

Teaching freshman mathematics courses and lecturing at seminars are factors in the preparation of college teachers in mathematics. The training in mathematics courses is also cited as being a part of such preparation.

## Physics

Teaching duties for laboratory assistants served as preparation for several of the physics graduates. One graduate noted the value to him of collecting carefully prepared and annotated lecture notes, particularly in newer phases of physics, which have been subsequently useful for reference.

## Psychology

As in many other departments, teaching experience gained during the graduate program was cited by several psychologists. Such experience might include lecturing to classes, writing test items, administering tests, scoring tests, grading, counseling undergraduate students, using visual aid equipment, and attending some faculty meetings. These things were supplemented by informal discussions with staff members and other students. One graduate wrote:

> There was some informal preparation in the sense that communication in our department between staff members and students was good. Thus, while we were students, we were able to participate vicariously in the staff's functions at times. This is probably an important factor in leading a graduate student into education.

It was pointed out that psychology concerns itself with principles of learning so that indirectly psychologists become aware of problems of teaching and course organization. Some attention is given to curriculum development and analysis in graduate seminars. Other experiences cited as preparation for college staff work are: research, field service, testing, and work at the Psychological Services Center. A graduate made this comment about his work at the Center:

> The experience at the University of Tennessee Psychological Services Center was of value in terms of helping me to understand both myself and the problems (and possible solutions) of interpersonal relations among staff members.

### Zoology

The opportunity to teach laboratory and discussion sections of courses in zoology is widely available to graduate students in the department. In addition, courses taken by graduate students are looked upon as specific preparation for college teaching. One graduate stresses ideas about dealing with subject matter and about general academic trends he gained through contact with members of the department. Another discusses the value of research activities in addition to the dissertation.

## Some Unanswered Questions

The data presented in this chapter give rise to certain questions which the various departments and other agencies charged with responsibility for the graduate program may want to consider. They may be of particular concern to those who have responsibilities for the preparation of prospective college teachers.

1. To what extent are the things seen by the subjects of this study as important in their graduate programs the things which the University should stress? Are there other matters of sufficient importance that they should receive more attention than the questionnaire respondents indicated was the case when they were students?

2. Since work as graduate assistants, teaching assistants, and instructors is almost a universal experience of Tennessee's graduates who go into college teaching, what additional things may be done to make this experience most valuable?

3. What other activities, either now practiced to some extent or not practiced at all, may be useful in the most effective preparation of prospective college teachers?

# CHAPTER IV

## PROBLEMS REPORTED BY GRADUATES NOW ON COLLEGE STAFFS

What problems or difficulties have doctoral graduates of Tennessee encountered in their careers as college staff members? Questionnaire respondents were asked to list or describe such problems briefly. It was hoped that the answers might do two things: give further evidence for evaluating their graduate preparation and provide information on typical kinds of difficulties faced so that future graduates of the institution preparing for college work might be made aware of them.

If these returns have any validity, it is time for some people to revise their stereotype of the college professor who has little to do but meet classes and lecture for a few hours per week. According to the subjects of this study, time does not hang heavy on the hands of the professor. The lack of time to do this or that was a recurring theme throughout the responses. Some lacked time for research, others for doing a good job of preparation for classroom instruction, others for attendance at professional meetings, others for counseling of students, and some just felt generally overloaded. A tally on this point found lack of time for something or a general feeling of being overburdened mentioned forty-eight times. Comments from three respondents seem worthy of citation:

> Faculty members are so busy with their own classes and teaching responsibilities they seldom have much opportunity or energy to find out what others are doing.
>
> -----
>
> I am shocked by the amount of wasted professional time which seems to be characteristic of most departments. The professional skills of highly qualified staff members are, it seems to me, subordinated to the non-instructional, non-research, and non-service activities.
>
> -----
>
> The greatest problem I have encountered is to find enough time to do some research along with an active teaching program. A lessening of time devoted to committee work, college programs, and other extracurricular activities as well as a lightened teaching load would be most helpful.

More people (twenty-three) found time limitations interfering with research than with any other part of their work.

A few professors evidently either did not have or did not perceive any difficulties or problems, even one involving time. Seventeen made no response or replied with such comments as "nothing serious" to the question concerning problems in their work.

Table 10 provides a summary by categories of problems reported. Time is not included as a separate category, since it is not coordinate with the other categories and may be related to any one of them. A quick glance at the table will indicate that problems were most frequent in two areas: research and administration. These areas were discussed so much more than any others that it may be concluded that they constitute two major "sore spots" for the staff members reporting. In addition to research and administration, other areas in which problems occurred with considerable frequency were classroom instruction, guidance and counseling, and relations with colleagues. Problems in relations with students were reported with surprising infrequency. A more detailed discussion of problems in the various categories follows.

## Difficulties in the Area of Research

As has already been indicated, one reason for difficulty in the area of research stemmed from the lack of time to do it. In fact, this was mentioned more frequently than any other specific difficulty in that area. Several people, particularly graduates in education, mentioned the lack of opportunity to do research and the lack of emphasis placed on staff research and writing in their present institutions. One respondent stated that research was not recognized as a desirable professional activity in his institution, while another remarked on the lethargy of his colleagues with respect to research. Insufficient research funds appeared as a problem for four people. A chemist who was engaged as a full-time researcher pointed out:

> Since research is by nature one problem after another, many difficulties have to be faced-- the choosing of projects to be worked on, the choice of methods, equipment, and instruments needed for a given project, the writing of grant requests, and cooperation with clinicians, whose approach is different from the research chemists.

Only one person mentioned feeling inadequate to do research himself, but some found difficulty in advising graduate students on research. One of them said:

> One of my problems is assisting students in gaining an understanding of the role and methods

## TABLE 10

## NUMBER OF DIFFICULTIES REPORTED IN VARIOUS CATEGORIES BY CURRENT COLLEGE STAFF MEMBERS

| Department | Number of Respondents | Research | Administration | Colleagues | Instruction | Counseling | Relations w/ Students | None |
|---|---|---|---|---|---|---|---|---|
| Bacteriology | 6 | 2 | 1 | | | | 1 | 4 |
| Botany | 8 | 5 | 5 | 3 | 3 | 1 | | 1 |
| Chemistry | 7 | 8 | 1 | 1 | 5 | 3 | 1 | |
| Chemical Engineering | 2 | | | | | 1 | | |
| C. & I. | 15 | 7 | 5 | 4 | 5 | 4 | 3 | |
| E. A. & S. | 31 | 10 | 14 | 8 | 9 | 11 | 4 | 1 |
| English | 11 | 2 | 6 | | 2 | | 1 | 4 |
| Geography | 2 | | | | | | 1 | 1 |
| Mathematics | 8 | 3 | 1 | | | | 1 | 3 |
| Physics | 6 | | 1 | 1 | 1 | 1 | 1 | 1 |
| Political Science | 1 | | | | | | | 1 |
| Psychology | 14 | 4 | 6 | | 4 | 2 | | 1 |
| Zoology | 5 | 3 | 3 | 1 | | | | |
| TOTAL | 116 | 44 | 43 | 18 | 29 | 23 | 13 | 17 |

> of research in education. How do you work with graduate students in preparing for and conducting research projects without the research becoming just another hurdle that must be overcome?

In some cases professors felt that they did not have enough student assistance in carrying on research projects.

In summary, many of the subjects of this study felt that conditions in their present institutions were not highly conductive to the research productivity which they would like to see. Apparently they feel that research is an integral and important part of their work as college staff members, but the demands of other more immediate obligations and pressures prevent their full participation in it. It would seem likely that an important key to the whole problem lies in the prestige which successful research bestows on the academician. One scientist put it this way:

> As a practicing scientist it is evident to me that the degree of fame acquired by a department depends, for the most part, on the quality of research that it turns out. In science departments especially, I would suggest relatively light teaching loads (two or three courses per year at most) with a large emphasis on research.

It is difficult to forecast whether these halcyon days for the academic researcher are approaching.

## Difficulties with Administrators and Colleagues

Perhaps few college administrators would maintain that administration in higher education is ideal, but it is somewhat doubtful whether they would agree with the dark picture of it painted by the subjects of this study. At times it almost appeared that some of the respondents seized upon the questionnaire as a welcome means of letting off steam about administration in their own institutions. In spite of a few bitter and vituperative comments, however, there was an underlying tone of genuine concern for improving administrative conditions. Few statements represented the extreme view illustrated by the following:

> I would suggest that every person who goes out from an institution of higher learning with a master's or a doctor's degree ... should be able to speak forcefully, and should be absolutely unafraid, especially of school administrators, who are often ignorant and bigoted.

Many staff-administrator problems center around what the respondents call undemocratic administration. Sometimes this takes the form of constant pressure on staff members not to express any views which differ from those of the administration. Pseudo-democracy is defined by one person as the policy which says you may think and do as you please as long as you do what the administration wants. Administrators are even accused of lacking any cognizance of academic problems. Autocratic administrators are taken to task through several incidents which respondents recall. In at least one instance cited the repercussions were rather far reaching:

> A new administration began operations with a very democratic approach of seeking faculty assistance and by being sensitive to faculty opinions. Most of the regulations and procedures recommended by the faculty were adopted. A climate of common endeavor developed which was rare and inspiring. Suddenly at the end of six months the administration began to withdraw delegated faculty committee functions and authority without notice and reassumed these for itself. Faculty meetings changed from twice a month to once every two months. After questioning for eighteen months, the more progressive and liberal half of the staff resigned. A year later all except four of the remaining members of the instructional staff resigned. The administration boasted in its publications that it had replaced all its faculty within a three year period.

Controversies between administration and staff often center around the procedures used in policy making. The lack of clear policy, especially with regard to personnel, is also a cause of dissension. Matters of tenure and promotion, especially when outsiders are brought into an institution, create insecurities among staff members. Failure to promote any staff member to an associate professorship and tenure since 1946 in one department having thirty-one staff members is reported as an illustration of poor administrative policy. One subject reported that the administration in his institution did not even have a broad program or philosophy of education which guided it. Another who is an administrator himself, discussed difficulties involved in policy formulation:

> Priority decisions on the urgent and/or the important sometimes lead to confusion. Specific objectives and long-range goals are not always clearly recognized by some who have to make such decisions. Educational values are sometimes lost in the pressure to do what seems necessary at the moment.

Frequent change of administrators, which often results in policy changes, also creates insecurities among staff members. One respondent is employed by a college in which, during a nine-year period there were three different presidents, four different deans, and four different registrars. In such a situation there is little wonder that personnel policies are haphazard and an air of uncertainty prevails. But even institutions with more stable administrations often lack adequate personnel policies, including established salary provisions and guidelines for granting sick leave and vacation.

Another problem center creating difficulties for staff and administration is finance. This one ranges from simple differences over salary to the securing of funds for the entire institution. The question of the extent to which a program or department must support itself causes difficulties. Occasionally departmental rivalries for budgetary advantages arise. The shortage of support generally for higher education leads to internal difficulties such as this one:

> One problem is administrative economy, which causes the hiring of inadequately prepared personnel on an emergency basis, allows the overloading of teachers, and often tends to postpone necessary expansion measures. All these are the falsest sort of economy.

Another false economy measure cited by a different respondent was the supplying of only two secretaries for a department having twenty-four full-time staff members with the result that the professional staff spent much time in clerical work.

As one might expect, along with the various administrative difficulties reported were some suggestions as to their causes. Inadequate communication between administration and staff was often mentioned. For example, the absence of staff meetings was blamed for lack of departmental unity; and the failure of a new program to be accepted was blamed on lack of coordinated publicity and administration. Better two-way communication between administrators and staff appears to hold much promise for decreasing staff-administrator conflict. One respondent wrote:

> There are staff conflicts with the college administration. This is possibly due to poor communications. The teaching staff is not informed of reasons for administrative action. I've witnessed too much of "what the staff doesn't know won't hurt," and "this is not a teaching problem."

Another reason cited for lack of administrative effectiveness was insufficient experience or preparation of administrators. Several administrators themselves reported that lack of administrative experience was a handicap. Some had had no other kind of administrative responsibilities before assuming their present positions. A registrar said that he lacked training in modern methods of handling student personnel records and reports. Perhaps a more fundamental reason than any of those cited above was perceived by a staff member who reported the following:

> I still feel that the lack of self-understanding prevents us from fully recognizing and understanding our motives. Much progress seems to be impeded because we are so suspicious of each other's actions or motives.

Erasing such suspicion might well serve to bridge the gap between colleague and colleague as well as between staff member and administrator. Significantly, the comments about difficulties with colleagues centered on departmental rivalries, depreciation of the quality of colleagues and feelings that colleagues do the same. One person found difficulty in working with near-retirement colleagues who have lost zest for their work. There is some feeling, especially among those in professional education, that colleagues from other departments do not appreciate their work and do not attempt to get to know them as individuals. On the other hand a scientist has difficulty because staff members in other fields of instruction think that the science teachers have too high standards of instruction and grading. A professor in a small college who constitutes a one-man department misses association with others in his field of study, while another reports difficulty in developing good working relationships with others in his department.

## Difficulties in Instruction

Included in instructional difficulties are problems of classroom teaching and problems in planning for and determining content of courses. Twenty-nine instances of such problems were reported. The most frequent complaint was that classes were too large for effective teaching. In such instances both teachers and students suffer, the respondents say. There was no indication of the actual numbers of students in the classes which were considered too large. The number of different courses an instructor had to teach and the difficulty of having sufficient time to prepare so that one would be competent in all of them created hardships. Some professors reported difficulty in teaching courses for which they did not have an adequate background.

Organizing and presenting lectures caused problems for several teachers. Lack of experience in speaking for an hour and difficulty in facing an audience were causes. How to make lectures more effective concerned the instructor who said:

> One problem that is probably common to each new instructor (with a fresh Ph.D. degree) is effecting a transition from the high-powered lectures that he is tempted to give (and does) when he starts his teaching, to the sound, thorough, clear lectures that must form his ultimate program. The instructor learns to teach rather than impress. He must curb his impatience with people, who never behave as one expects them to.

For one staff member, a modification in method proved helpful:

> I have found that an adjustment in teaching methods from straight lecture to a combination of lecture and class discussion has been of help to the students and has made me feel more satisfied that I am doing a good job.

Finding satisfactory texts, grading, challenging and holding the interest of superior students, and determining the level of instruction which would secure understanding in a particular class were also problems in the area of classroom teaching. So was the determination of what difference in content there should be in basic courses between sections composed of majors in a field and those composed of students taking such courses for general cultural background. One professor felt that there was generally lack of emphasis on quality in the classroom on his campus; he had either to accept standards set by other professors or be unpopular among both students and colleagues.

Content and organization of courses become problems for an inexperienced instructor. This is particularly true when a professor is offering a course for the first time or when a new course is introduced into the program. Determining the scope, organization, and content of a new program was also reported to involve problems.

## Difficulties in Counseling and in Relationships with Students

Although the areas of counseling and relationships with students are closely allied, they are tallied separately in Table 10. In the latter category are included such things as criticisms of weaknesses of students and discipline problems rather than difficulties found in carrying out guidance and counseling functions.

Guidance and counseling problems most frequently stem from the small amount of time which can be devoted to such work. Large classes tend to make individual help for students almost impossible and in some cases make it impossible for the instructors even to get to know the students by name. This complaint seems to be supported by the small per cent of staff time generally allocated to counseling. (See Table 5.) Lack of experience and preparation and limited knowledge of techniques are factors in inadequate counseling. The absence of specialized services is felt by some, but the presence of such services also causes problems. One professor reported that the staff in his college was not loaded down with advisees because a special staff performed that work, but there was a feeling on the part of the academic staff of insufficient liaison between instructors and students. Specific counseling problems cited include convincing incapable students of the wisdom of withdrawal from college, creating professional awareness in departmental majors, and guiding students into depending upon their own resources. One professor says:

> My chief problem is in getting the student to develop some notion of what he is trying to accomplish (other than academic credit) and to order his behavior so as to reach the objective.

The feeling expressed above is concurred in by others.

In the area of student-staff relations the time-honored custom of flaying the academic inadequacies of students is renewed by the subjects of this study, although the number doing so is rather small. Too many weak students who fail to use their time and just want to get by are typified in this comment:

> We face to a great extent an indifferent attitude on the part of some students. They fail to realize the importance of using their time to prepare themselves for the future. Some of them have loafed through school all the way up to college and want to get by four more years.

Even the graduate student who has as his only objective the securing of another degree so that he can obtain a salary increase comes in for criticism. Several professors report that they are perplexed by their own shortcomings in understanding the problems of slow and uninterested students and that they are at a loss in helping them. Poor discipline was mentioned only once as a problem.

## Miscellaneous Problems

Several problems which seem worth treating here were reported in areas not covered by any of the categories already discussed. The inability to engage in activities for professional improvement bothered eight people. Such activities included attendance at conventions and other professional meetings. Professional financial needs such as inadequate departmental supply funds and out-of-date laboratory equipment were reported by seven people, while five said they had to make personal financial sacrifices to remain in college teaching. Overcrowded classrooms and offices were problems to four, while lack of sufficient assistance affected a like number. Two reported having to perform duties they did not feel were an integral part of their job. Two felt that some of their weaknesses were traceable to inadequate training in their major field. Just as a reminder that modern technology has caught up with some parts of the campus, an administrator reported simply: "The parking problem."

## Post-Doctoral Research and Publication

In spite of the relative recency of graduation and of the difficulties reported in finding time to do research, an overwhelming proportion of the respondents indicated they had either participated in research projects and/or had published work. Some individuals had published several articles. While no attempt was made to categorize or evaluate such work, the number reporting research activity and/or publication is presented in Table 11.

## TABLE 11

## NUMBER OF QUESTIONNAIRE RESPONDENTS REPORTING POST-DOCTORAL RESEARCH AND/OR PUBLICATION

| Department | Yes | No |
|---|---|---|
| Bacteriology | 3 | 3 |
| Botany | 6 | 2 |
| Chemistry | 6 | 1 |
| Chemical Engineering | 2 | 0 |
| Curriculum & Instruction | 10 | 5 |
| Educational Administration and Supervision | 17 | 14 |
| English | 5 | 6 |
| Geography | 2 | 0 |
| Mathematics | 8 | 0 |
| Physics | 4 | 2 |
| Political Science | 1 | 0 |
| Psychology | 12 | 2 |
| Zoology | 5 | 0 |
| TOTAL | 81 | 35 |

# CHAPTER V

## SUGGESTIONS FOR PREPARING COLLEGE STAFF MEMBERS

The questionnaire respondents were asked to suggest things which should be part of a graduate program to assist in the preparation of teachers able to cope adequately with the problems of a college staff member. The purpose of this item was not only to determine the frequency of suggestions related to categories but also to elicit unusual ideas of any kind which might be profitable to those who are concerned with the program of preparation. While the item was not intended to provide an evaluation, many respondents commented on the adequacy of their own preparation and others suggested only things which might have been added to their programs. Thus, the number of times a suggestion appeared related to a category included in Table 12 is not necessarily a reflection of the number of respondents who would consider it of value, but merely a tabulation of the number of times it was specifically stated. However, it must also be remembered that the listing of a suggestion or failure to list it may reflect the importance which an individual attaches to it. This is another way of cautioning that the evidence presented in this chapter, and indeed in the entire study, depends upon the perceptions of the respondents and their statement of those perceptions.

### Suggestions Related to College Teaching Experience

Teaching experience as a part of the graduate program was strongly recommended for all advanced graduate students by some respondents. A bacteriologist made this comment:

> Personally, I believe every doctoral student should be required to teach or assist in a laboratory section for at least one year of his graduate study. This requirement should be as much a part of his program as the dissertation or the language examination.

A physics professor commented on the tendency of some graduate assistants to look upon teaching as a chore to be performed only for partial financial support and pointed out that such work provides opportunity for the development of techniques of teaching. A graduate in education felt that such experience would be more worthwhile if it were looked upon as an internship which could be done either at the institution granting the degree or elsewhere.

## TABLE 12

## TABULATIONS BY MAJOR CATEGORIES OF SUGGESTIONS FOR PREPARATION MADE BY CURRENT STAFF MEMBERS

| Department | Number of Respondents | None | College Teaching Experience | Study of Teaching | Study of Institutional Operation | Subject Matter Emphasis | Research and Writing |
|---|---|---|---|---|---|---|---|
| Bacteriology | 6 | 2 | 2 | 2 | 1 | 1 | 0 |
| Botany | 8 | 2 | 2 | 3 | 0 | 4 | 0 |
| Chemistry | 7 | 1 | 5 | 1 | 1 | 1 | 4 |
| Chem. Eng. | 2 | 0 | 1 | 0 | 0 | 1 | 0 |
| C. & I. | 15 | 2 | 4 | 4 | 2 | 1 | 2 |
| E. A. & S. | 31 | 4 | 7 | 5 | 9 | 3 | 7 |
| English | 11 | 3 | 3 | 2 | 1 | 1 | 2 |
| Geography | 2 | 0 | 0 | 0 | 0 | 1 | 1 |
| Mathematics | 8 | 2 | 0 | 1 | 1 | 2 | 1 |
| Political Sci. | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Psychology | 14 | 2 | 6 | 7 | 3 | 0 | 0 |
| Zoology | 5 | 1 | 3 | 1 | 1 | 1 | 3 |
| TOTAL | 116 | 19 | 33 | 26 | 19 | 16 | 20 |

Several people who discussed the need for teaching experience felt that the experience alone was not sufficient--that it should be accompanied by appropriate supervision and counseling of senior departmental staff members. Such views seem to be summarized in this statement:

> The graduate student who has plans for teaching in college should have experience in teaching college students during his graduate program. His teaching should be observed by members of the staff. The student should meet with the staff at regular intervals to discuss his progress, or lack of progress, as a teacher.

In discussing teaching experience, most graduates seemed to think of part-time work as graduate assistants or instructors. However, additional things mentioned included the preparation and presentation of lectures to advanced students and staff followed by critiques, the presentation of papers on special topics at seminars and professional meetings, and observation of outstanding teachers.

## Suggestions Related to Instruction in College Teaching

Discussed under this heading are ideas for instruction in classroom procedures, techniques of teaching, testing and evaluation, and teaching problems. Among the specific suggestions are training in techniques of teaching college classes, seminars for consideration of problems and issues in college teaching, and the requirement that a student prepare an outline for a course he will likely teach. In pointing to the need for study of college teaching procedures an education graduate says:

> I feel that there is a crying need at the graduate level for more consideration in the techniques of college teaching. There is far too much hit and miss, "monkey see, monkey do" in classroom instruction at the graduate level. Graduate students planning to go into college teaching should be given some opportunity to explore different and better techniques of teaching for the college classroom.

Commenting to the same point, a psychologist notes the lack of such training in the graduate program at Tennessee:

> The most serious deficiency as I perceive it was the lack of a systematic approach to training

> professional educators. The subject-matter emphasis rightfully should have occupied the position of prime importance that it did. A course at the graduate level, however, in techniques of teaching and evaluating student performance would have been most helpful. This is probably a more valid criticism of the program for students in disciplines other than psychology and education than it is even for students in these departments.

While agreeing as to some need for work in teaching techniques, a physicist demurs on the competence of education to conduct it:

> Possibly a course in which "effective teaching" is studied (use of audio-visual materials, proper use of colored chalk, avoidance of poor teaching habits such as dull and boring lecture presentations, ignoring "back row" students, and using improper quiz questions) would be useful, but I doubt that much would be gained if such a course were in the hands of the Education Department.

A botanist, however, felt there might be value in weekly seminars of the teachers-in-training at which problems of teaching could be discussed jointly among students, major department staff, and education staff members.

Several suggestions were aimed directly toward the improvement of the lecture. Commenting that a lecture platform is not the place to mumble or become shy, one respondent offered the notion that those who are found to be deficient in oral presentations should be required to take a course in public speaking. Practice in speaking before a critical audience was also suggested. Learning how to organize, prepare, and deliver effective lectures was described as one way of improving college teacher preparation.

The need for practical information about testing and grading was cited by several people. According to them particular attention should be given to matters of test and examination construction, means of evaluating students, grading papers, and the validity and values of various kinds of testing procedures.

## Suggestions Related to Study of Institutional Operation

The suggestions related to institutional operation varied from one concerning the need to understand the logistics of planning massed freshman sections to another concerning the need to understand the structure and purposes of different types of higher education institutions. Perhaps the most poignant statement came from a mathematics professor:

> A course in social science dealing with the concepts of status, power, and the structure of institutional hierarchies would seem imperative for any professional work.

While others dealt more gently with the matter, there were other suggestions in the same vein. For instance a psychologist suggested a seminar for graduate students at which administrative and departmental structure is discussed with emphasis on the effect of policy decisions made by governing and administrative officials on the teaching staff. Another graduate in this field suggests:

> I have noticed that all I have learned about how a University operates (aside from classroom instruction) I have had to pick up in "on the job training." Such matters as departmental budgets, personnel policies, estimating research budgets, physical layouts for departments in new buildings, and university committee work were ignored or left to osmosis, for which few graduate students have time.

It was suggested that information concerning these other items of institutional operation is needed: purchasing, work loads, record keeping, selecting library acquisitions wisely, problems of financing a college, and pressures exerted upon the administration of a college. A graduate of Curriculum and Instruction said:

> There should also be a rather careful examination of existing types of institutions of higher learning with attention given to internal organization, functions, and types of programs. It might also be wise to make certain that graduate students have an opportunity to investigate the role of the instructor in their own institution.

Several respondents remarked on their lack of knowledge of what was expected of them as college staff members when they went into their current positions. Some stated that this was a problem of orientation for their current institution; another suggestion indicated that permitting and encouraging graduate students to observe faculty, departmental, and committee meetings might help the prospective college staff member understand policy formulation, program planning, scheduling, curriculum revision, and student personnel policies. A graduate of Educational Administration and Supervision suggested this:

> I strongly recommend a period of a few weeks in which graduate students might visit and study various administrative offices in terms of procedures, organization, problems, and strengths. I believe this would help each person to be a better teacher, for many college teachers lack this kind of general information.

Other graduates of Administration and Supervision who are now in administrative positions suggested special courses which would have been of help to them such as a course in the work of the registrar.

This unusual procedure was suggested by a bacteriologist: that a department head or major professor could do a real service for his students by counseling them on administrative procedures during the period between the student's completion of his work and the awarding of the degree or his reporting for a new job.

## Suggestions Related to Subject Matter Emphasis

Five respondents specifically stated a belief that content only or "academic discipline" was the essential ingredient in the preparation of college teachers. Several others stressed the importance of continued strong emphasis on subject matter preparation.

One specific proposal was that all graduate students looking toward college teaching be advised to attend the lecture sequence in the elementary course in his field to refresh his own knowledge and to see in what ways it differed from the elementary course he took. An English professor discussed broad values accruing from his graduate courses:

> The love for learning, the appreciation for literature, and the admiration for stable scholarship, of course, are a part of any preparation for teaching. These traits are a part of all the literature courses which I had at Tennessee. To mention them is to seem somewhat general and indefinite; to try to remove them, however, would be to lessen the general value of my graduate work.

Two respondents felt that increasing the offerings in the field of their major was needed, while four others cited the need for less specialization and the development of breadth of understanding through work in fields related to the major.

Five graduates stated that it was impossible to anticipate problems attendant to college staff work and that, therefore, the graduate program could do nothing to prepare for coping with them. While these statements were not explicit, several of them seemed to imply that knowledge of his teaching field was the only preparation which a prospective college teacher could possibly receive. Perhaps this viewpoint was most forcefully stated by a physics professor:

> A sincere attempt to teach must come as a consequence of a desire to impart knowledge to others; such a desire is innate and requires only interest in the field of study in order to promulgate it. The graduate program hence only serves as the providing of the tool, which it accomplishes adequately; the use of the tool is something that must be acquired thru experience.

## Suggestions Related to Research and Writing

The importance of research in preparing college staff members with some attendant suggestions for improving research was discussed by several respondents. Greater emphasis on varied techniques in modern methods of research was proposed as was more training in statistics. One person suggested the need for providing information in the use of machines for processing research data. Two graduates of the English department felt emphasis should be placed on the value of foreign language to the graduate student; this point is included here because of the presumed use of foreign language as a research tool. A zoologist presented this practical argument for greater emphasis on research:

> Most colleges and universities want teaching personnel who have an active interest in some research activity; therefore, graduate students, especially at the Ph.D. level, should spend more time actively engaged in research activities rather than in course work.

Two suggestions were made for increased emphasis on writing term papers and theses as a means of improving the writing of graduates. Skills developed in this way may be useful in later work for publication.

To round out the picture with regard to suggestions about research, it should be pointed out that a few strong demurrers were filed. These were to the effect that while research is important, training should be pointed more toward producing a scholarly teacher rather than a scholarly researcher. The comment of an English professor seems pertinent here:

> Perhaps the doctoral programs in English are too exclusively directed toward the preparation of research scholars. I found myself lacking in the critical ability needed for the kind of undergraduate teaching I have been engaged in since my graduation. (My training, however, provided me with the means to correct this deficiency on my own.)

## Miscellaneous Suggestions

Some suggestions were of such a nature that they could not well be tabulated under any of the major headings included in Table 12. The largest number (seven) suggested study of counseling techniques and/or experience in counseling college students. Each of the following suggestions for improving graduate preparation of college staff members was made by at least one person; some were presented by two or three:

1. Graduate students should have opportunities to attend professional meetings.

2. Each department should make available information on the kinds of auxiliary work (consulting and writing) in which college teachers can engage to supplement meager salaries.

3. The staff should attempt to improve relations with advanced graduate students so that the transition to full colleague status is not the crossing of a great abyss.

4. A minor in some liberal arts field should be required of all education majors. (Suggested by two education graduates.)

5. Graduates should have the opportunity to return to graduate school every four or five years to take a look at new developments.

6. Prospective college teachers should develop a set of professional ethics.

7. There should be greater cooperation among the various departments in the University.

8. Prospective college teachers should develop an adequate philosophy of higher education.

9. The graduate school should develop a good "screening program" to insure the quality of prospective college teachers.

10. There should be more social activities to give graduate students a better opportunity to know each other and the staff informally.

11. Offer a course, "How to Live on Less Than Your Neighbor."

12. Requirements for the degree should be so administered as to be looked upon as an opportunity to acquire skills necessary to participate in the profession rather than as hurdles to prevent a student from getting his degree.

Two graduates wrote extensively and with feeling in regard to the last item. One stated that he did not see the necessity of developing fear of failing preliminary or oral examinations as a means of motivating graduate students. After stressing great need for a rigid selection program for doctoral students, the other continued in this vein:

> Once the student passes all exhaustive entrance requirements we should set him free to pursue his objective with the help of the staff. Too many programs, including the one I see prevailing at my present institution are based on a "cat and mouse" proposition--students are on one side trying to outguess the professors on the other. Actually it should be a cooperative process in which the students and their professors attack the problems in their field together, recognizing, of course, that the professors know much about the problem that students will learn.

## Summary

It will be quickly recognized that if all the suggestions presented in this chapter were to be included in the graduate work of any one student they would constitute a rather lengthy program. The various suggestions presented here, however, may prove useful to those who have the responsibility for the graduate education of prospective college teachers in improving programs designed to prepare effective college staff members. Whether changes are desirable and if so whether they lie in the areas of teaching experience, study of teaching, study of institutional operation, content of the field, research and writing, or some others are decisions of great importance to the future college teacher and to those he will affect.

# APPENDIX

# UNIVERSITY OF TENNESSEE ADVISORY COMMITTEE FOR RESEARCH ON COLLEGE TEACHING

Dale Wantling, Dean of the Graduate School, Chairman

Ira N. Chiles, Professor Education

N. E. Fitzgerald, Dean, College of Education

A. T. Granger, Dean, College of Engineering

Orin B. Graff, Head, Department of Educational Administration and Supervision

Druzilla Kent, Head, Department of Home Economics Education

Kenneth L. Knickerbocker, Dean, College of Liberal Arts

Joseph A. Martin, Professor of Agricultural Economics

E. Ohmer Milton, Associate Professor of Psychology

Fred H. Norris, Professor of Botany

N. D. Peacock, Dean, College of Agriculture

Bain T. Stewart, Associate Professor English

Charles P. White, Head, Department of Finance

A. B. Wood, Head, Department of Engineering Drawing

# UNIVERSITY OF TENNESSEE DOCTORAL GRADUATE QUESTIONNAIRE

Name ____________________________ Present Title __________________

Institution ____________________ Department ______________________

1. What per cent of your work load is generally allocated to:
    Teaching ______ Student Counseling ______
    Field Service ______ Other (Specify)
    Research ______ ____________ ____________
    Administration ______ ____________ ____________

2. Names of courses you usually teach: __________________________
    ____________________________________________________________________
    ____________________________________________________________________

3. What, if any, courses do you teach or have you taught for which you had no specific subject matter preparation in graduate school? ____________________________________________________

4. Did you have teaching experience as a full-time staff member prior to receiving your doctorate? Yes __ No __ If so, in:
    College _____ Number of years _____
    High School _____ Number of years _____
    Elementary School _____ Number of years _____
    Other _____ Number of years _____

5. Including the present year, what is your total number of years of experience as a full-time member of a college staff? _____

6. What were your intentions with regard to college teaching while you were enrolled in your graduate program?
    Expected to go into college work _____
    Expected to enter some other work _____
    Were uncertain of the kind of work you would enter _____

7. Were you employed as an instructor, graduate assistant, or teaching assistant during your graduate program? Yes ____ No ____ If so, for how many quarters? ____

8. On the basis of your experience since you received your doctorate, what would you say were the three most important things you got from your graduate education?
    a. ____________________________________________________________
    ____________________________________________________________
    b. ____________________________________________________________
    ____________________________________________________________
    c. ____________________________________________________________
    ____________________________________________________________

9. Describe briefly any specific preparation (formal or informal) for work as a college staff member which was a part of your graduate program. (Use back of page if necessary.)

10. List or describe briefly some problems or difficulties you face or have faced in your career as a college staff member. Include problems in areas such as classroom instruction, guidance and counseling of students, relationships with colleagues or administrators, field services, participation in research, or any others. (Use back of page if necessary.)

11. Suggest things which should be part of a graduate program that would assist a student to prepare to cope adequately with the problems of a college staff member. (Use back of page if necessary.)

12. List or describe briefly any research or publications of yours since you received doctorate.

## LETTER SENT TO QUESTIONNAIRE RECIPIENTS

THE UNIVERSITY OF TENNESSEE
KNOXVILLE
The Graduate School

October 24, 1958

In these days of increasing demands on colleges and college personnel, the University of Tennessee is examining its graduate programs which prepare students for college teaching positions. The various colleges and departments offering doctoral programs are cooperating in this project. Would you take a few minutes of your time to help us in this task by completing the enclosed questionnaire?

This information is being requested of all University of Tennessee doctoral graduates since 1948 who are now college staff members. The data will be most helpful to the Graduate School and to the departments in conducting a thorough analysis of their programs.

Would you return the completed questionnaire in the enclosed self-addressed, stamped envelope at your earliest convenience? Your assistance will be greatly appreciated.

Sincerely yours,

Dale Wantling
Dean

## TABLE 13

## NUMBER AND PER CENT OF RETURNS OF UNIVERSITY OF TENNESSEE DOCTORAL GRADUATE QUESTIONNAIRE

| Department | Number Returned | Per Cent Returned |
|---|---|---|
| Bacteriology | 6 | 85.7 |
| Botany | 8 | 100.0 |
| Chemistry | 7 | 100.0 |
| Chemical Engineering | 2 | 66.7 |
| Curriculum and Instruction | 15 | 93.3 |
| Educational Administration and Supervision | 31 | 93.9 |
| English | 11 | 91.7 |
| Geography | 2 | 100.0 |
| Mathematics | 8 | 88.9 |
| Physics | 6 | 100.0 |
| Political Science | 1 | 100.0 |
| Psychology | 14 | 100.0 |
| Zoology and Entomology | 5 | 71.4 |
| Medical College | 4 | 36.4 |
| TOTAL | 120 | 88.2 |

## TABLE 14

## NUMBER OF DOCTORAL GRADUATES SERVING IN INSTITUTIONS OF HIGHER EDUCATION, BY INSTITUTION

| Institution | Number |
|---|---|
| University of Tennessee | 15 |
| East Tennessee State College | 5 |
| University of Georgia | 5 |
| Tennessee Polytechnic Institute | 4 |
| Memphis State University | 4 |
| Middle Tennessee State College | 3 |
| University of West Virginia | 3 |
| Georgia Institute of Technology | 3 |
| University of Mississippi | 3 |
| Louisiana State University | 3 |
| Florida State University | 3 |
| Austin Peay College | 2 |
| Wayne State University (Michigan) | 2 |
| Randolph-Macon Woman's College | 2 |
| Tennessee Wesleyan College | 2 |
| Lincoln Memorial University | 2 |
| Southern Missionary College | 2 |
| Western Carolina College | 2 |
| State Teachers College (Indiana, Pa.) | 2 |
| University of South Carolina | 2 |
| University of Missouri | 2 |
| North Carolina State College | 2 |
| University of Rochester | 2 |
| University of Connecticut | 1 |
| Medical College of South Carolina | 1 |
| Harvard University | 1 |
| Carson-Newman College | 1 |
| Upland College (California) | 1 |
| Arkansas State Teachers College | 1 |
| Duke University | 1 |
| Purdue University | 1 |
| University of Buffalo | 1 |
| Davidson College | 1 |
| University of Oklahoma | 1 |
| Louisiana Polytechnic Institute | 1 |
| University of Dayton (Ohio) | 1 |

TABLE 14 (cont'd)

| Institution | Number |
|---|---|
| Ball State Teachers College | 1 |
| David Lipscomb College | 1 |
| Princeton University | 1 |
| San Jose State College | 1 |
| Long Beach State College (California) | 1 |
| Texas A. & M. | 1 |
| Appalachian State College | 1 |
| Northern Illinois State Teachers College | 1 |
| Taylor University (Indiana) | 1 |
| University of Florida | 1 |
| Berry College — Rome, Ga. | 1 |
| Eastern Kentucky State College | 1 |
| Montreat College | 1 |
| University of North Carolina | 1 |
| Grace Theological Seminary (Indiana) | 1 |
| Meridian Junior College | 1 |
| Marshall College | 1 |
| Lander College (South Carolina) | 1 |
| William Carey College (Mississippi) | 1 |
| Wittenberg College (Ohio) | 1 |
| Wisconsin State College (Eau Claire) | 1 |
| William Jewell College (Missouri) | 1 |
| University of Chattanooga | 1 |
| Central Michigan College | 1 |
| Michigan State University | 1 |
| Kansas State University | 1 |
| University of Massachusetts | 1 |
| Tulane University | 1 |
| State Teachers College (New Paltz, N.Y.) | 1 |
| Wake Forest University | 1 |
| Miami University (Ohio) | 1 |
| Madison College (Virginia) | 1 |
| University of Kansas | 1 |
| Higher Teachers Training College (Iraq) | 1 |
| Birmingham Southern College | 1 |
| Bowling Green State University (Ohio) | 1 |
| TOTAL | 125 |

## TABLE 15

## RANK OR POSITION ATTAINED BY UNIVERSITY OF TENNESSEE DOCTORATES SERVING IN HIGHER EDUCATION

| Department | Number of Respondents | Professor | Associate Professor | Assistant Professor | Instructor | Department Head | Academic Dean | Student Personnel Officer | Director, etc. |
|---|---|---|---|---|---|---|---|---|---|
| Bacteriology | 6 | | 1 | 2 | 2 | 1 | | | 1 |
| Botany | 8 | 2 | 1 | 3 | | 1 | | | 1 |
| Chemistry | 7 | 1 | 2 | 3 | | | | | 1 |
| Chem. Eng. | 2 | 1 | | 1 | | | | | |
| C. & I. | 15 | 2 | 5 | 3 | 1 | 2 | 1 | 1 | 1 |
| E. A. & S. | 31 | 3 | 8 | 5 | | 1 | 2 | 3 | 10 |
| English | 11 | 1 | 3 | 5 | | 2 | 1 | | |
| Geography | 2 | 1 | | 1 | | 1 | | | |
| Mathematics | 8 | 1 | 3 | 3 | 1 | | | | |
| Physics | 6 | 2 | 1 | 3 | | | | | |
| Pol. Sci. | 1 | | | | | | | | 1 |
| Psychology | 14 | | 8 | 4 | 1 | | | | 3 |
| Zoology | 5 | 1 | | 3 | 1 | 1 | | | |
| TOTAL | 116 | 15 | 32 | 37 | 6 | 9 | 4 | 4 | 18 |

Note: Where a staff member listed more than one title, both were tabulated.